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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,988	11/08/2001	Sture Helmersson	19378.0012	6778

7590 05/13/2003

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EXAMINER

PALABRICA, RICARDO J

ART UNIT PAPER NUMBER

3641

DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,988

Applicant(s)

HELMERSSON ET AL.

Examiner

Rick Palabrica

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2003 and 13 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,6,7,11, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment in Paper No. 12 correcting the specification, canceling claims 1, 4 and 5, adding new independent claims 13 and 14 and amending claims 2, 3, 6-12 is acknowledged. Applicant's supplementary response in Paper No. 13 amending new independent claim 14 is also acknowledged.

2. Applicant traversed the rejection of claims as being anticipated by Ueda et al. on the grounds that the cut in an inner portion of the wing of the control rod embodiment cited by the examiner in the previous Office Action functions only to "reduce weight" and **NOT** to "control burn up of fissile material", as in the claimed invention.

Applicant's arguments have been fully considered but they are not persuasive because the feature upon which the applicant relies is a statement of intended or desired use.

Note that the claims are directed to an apparatus, i.e., a control rod. The feature cited by the applicant does not serve to patentably distinguish the claimed structure over that of the reference, as long as the structure of the cited reference is capable of performing the intended or desired use. See MPEP 2111-2115.

The recesses in the control rod of Ueda et al. is capable of being used in the same manner and for the intended or desired use as the claimed invention. Although Ueda et al. may have intended the recesses to reduce the weight of their control rod, they also inherently function to control burn up of fissile material by reducing neutron absorptions in the aperture areas, as in the claimed invention

See also MPEP 2114 that states:

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647.

Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531.

[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528.

As set forth in MPEP 2115, a recitation in a claim to the material or article worked upon does not serve to limit an apparatus claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2, 3, 6, 7, 11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al. (U.S. 5,034,185). Ueda et al. disclose reactor control blades for a boiling water reactor that are designed to increase the reactor shutdown margin and extend their lifetime (see Figs. 1-42). Fig. 1 shows a cruciform control rod wherein each one of the absorber blades comprises an absorber material distributed in the longitudinal direction, whereby the mean value of the absorber material per unit length

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of the control rod is smaller in the upper part than in the lower part (see column 9, lines 22+ and also Figs. 12A-12G). Figs. 12A-12G show different embodiments wherein the upper part of a blade has a lower amount of absorber material than a lower part. This upper part also constitutes at most one-third of the length of the blade. The neutron absorber blades comprise a plurality of radially arranged channels having equal diameters. Ueda et al. further disclose the absorber material consisting of hafnium and/or boron (e.g., see column 8, lines 60+ and column 38, lines 2+).

Fig. 36A shows an embodiment that exemplifies the outer part of the blade being provided with absorber material and the inner part lacking absorber material. Note that the inner part constitutes at least one-third of the blade width. Fig. 36A also discloses an example of engagement recesses (633, X_d) being formed by partially cutting the inner end of the neutron absorber blade in the width wide direction, whereby the recess in the upper part is wider than the recess in the lower part. The specific number of these recesses is a matter of engineering choice. This figure further illustrates an example of channels in the upper part being shorter than in the lower part.

As to the relative dimensions of the parts of the blade discussed above, note that while patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of the claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

See section 2 above on the discussion of applicant's traverse of Ueda et al. in his response to the previous Office Action.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

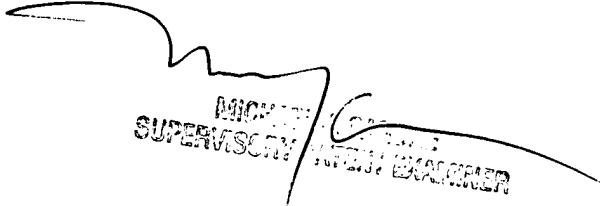
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 703-306-5756. The examiner can normally be reached on 7:00-4:30, Mon-Fri; 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

RJP
May 12, 2003


MICHAEL J. COOPER
SUPERVISOR